CLAIMS

1. In a system consisting of a cell phone, wireless network, and a base station, for cell communication packets having a formatted header containing information about the packet, said cell phone comprising a modulator/RF detector and a DSP, the improvement comprising means for

transparent bi-directional translation of audio/video protocols into Internet standard protocols, thereby allowing direct attachment to other stream oriented network protocol devices without interposed protocol translation while reducing complexity.

2. The improvement of Claim 1 wherein said means for transparent bi-directional translation of audio/video protocols into Internet standard protocols includes means for storing an incoming packet in an cell phone application memory; means for comparing the incoming packet with a plurality of predetermined patterns stored in a content addressable memory to identify a matching pattern; means for processing the incoming packets simultaneously with said comparing means for determining whether the packet is valid; means operative upon a matching pattern being identified and the packet being determined valid for processing said packet in accordance with the identified pattern; and means operative upon failing to identify a matching pattern or upon determining the packet to be invalid for processing said packet in a software process.

3. A method of accelerating a stream-oriented network transport protocol involving a system having a cell phone, wireless network, and a base station, for cell communication packets having a formatted header containing information about the

packet, said cell phone comprising a modulator/RF detector and a DSP, means for

transparent bi-directional translation of audio/video protocols into Internet standard

protocols, thereby allowing direct attachment to other stream oriented network

protocol devices without interposed protocol translation while reducing complexity,

the method comprising analyzing packet traffic on the wireless network to identify

classes of predictable protocols which characterize a majority of such packets;

implementing programmable hardware logic to process such classes of protocols, said

programmable logic being clocked at a rate corresponding to a signaling rate on the

network; analyzing the header of a packet to identify one of said classes to which said

packet belongs; controlling said programmable logic in accordance with the identified

class to process the packets; and processing in software routines instead of said

programmable logic packets which do not belong to one of said plurality of classes.

4. In a system consisting of a cell phone, wireless network, base station, and gateway

to Internet networks, for cell communication packets having a formatted header

containing information about the packet, said gateway comprising a wireless network

protocol attachment, a protocol translation application, and a Internet network

attachment, the improvement comprising means for transparent bi-directional

translation of audio/video protocols into Internet standard protocols, thereby allowing

direct attachment to other stream oriented network protocol devices without

interposed protocol translation while reducing complexity.

5. The improvement of Claim 4 wherein said means for transparent bi-directional

translation of audio/video protocols into Internet standard protocols includes means

for storing an incoming packet in an gateway application memory; means for comparing the incoming packet with a plurality of predetermined patterns stored in a content addressable memory to identify a matching pattern; means for processing the incoming packets simultaneously with said comparing means for determining whether the packet is valid; means operative upon a matching pattern being identified and the packet being determined valid for processing said packet in accordance with the identified pattern; and means operative upon failing to identify a matching pattern or upon determining the packet to be invalid for processing said packet in a software process.

6. A method of accelerating a stream-oriented network transport protocol involving a system having a cell phone, wireless network, base station, and a gateway, for data packets having a formatted header containing information about the packet, said gateway comprising a wireless network protocol attachment, a protocol translation application, and a Internet network attachment means for transparent bi-directional translation of audio/video protocols into Internet standard protocols, thereby allowing direct attachment to other stream oriented network protocol devices without interposed protocol translation while reducing complexity, the method comprising analyzing packet traffic on the network to identify classes of predictable protocols which characterize a majority of such packets; implementing programmable hardware logic to process such classes of protocols, said programmable logic being clocked at a rate corresponding to a signaling rate on the network; analyzing the header of a packet to identify one of said classes to which said packet belongs; controlling said programmable logic in accordance with the identified class to process the packets;

and processing in software routines instead of said programmable logic packets

which do not belong to one of said plurality of classes.